

The Ballarat Naturalist

July 2014



Little things mean a lot!

This was the title that Graeme Ambrose gave to his talk on the important ecological roles of lichens and bryophytes. He had given this talk earlier in the day to a group of land management people at St Arnaud.

Lichens and bryophytes are often dismissed as "boring, little plants". Even field naturalists are guilty of this by keeping lists of birds and flowering plants but many other groups of smaller organisms receive less attention. This is often due to the lack of accessible information to accurately identify species by visual observation. Graeme has prepared field guides for local mosses, liverworts and lichens that he used for teaching purposes.

Cryptogam is a group name for organisms that produce spores, as opposed to the seeds produced by higher plants. Crypto+gam means "hidden reproduction", since the spore producing organs are usually small or hidden. Cryptogams include ferns, bryophytes (mosses, liverworts and hornworts), lichens, bacteria (including cyanobacteria), algae and moulds. Most, except ferns, lack true vascular tissue.

Several types of cryptogams often grow together to form a small community only centimetres across. This was shown in a photo of a basalt rock at the University of Ballarat. Over a 20-yr period, ten species colonised the rock only 42 cm long. The microclimate varied from a dry north end to the well-sheltered southern face receiving water flow and no direct sun.

Cryptogams are important contributors to biodiversity. They contribute substantially to above-ground biomass especially in harsh environments such as deserts, arctic regions and alpine areas. Cryptogams contribute to soil formation, nutrient cycling and erosion. Acids produced by decaying lichens increase weathering of rock. Nitrogen fixing cyanobacteria found in lichens and bryophytes increase soil nitrogen. Biocrusts in deserts slow water run off and bind

soil particles together to reduce erosion.

Lichens are organisms that are a partnership between photosynthetic green alga and fungus. Both partners benefit - the alga provide sugars and the fungus provides the overall structure and absorbs water and minerals from the environment.

Lichens have four growth forms:

1. Foliose: leathery leaves, more or less flat on the substrate.
2. Fruticose: erect or hanging stems.
3. Crustose: crust-like or stain-like growth embedded in the wood or rock substrate.
4. Leprose: powdery, composed of tiny granules.

Lichens reproduce asexually by forming small bundles of fungi and algal cells which break off and can be carried away by wind, water or animals. The fungal component can form spores by sexual reproduction.

Bryophytes literally meaning “moss plants” is a group name for small, spore-producing plants that lack true vascular tissue. There are three distantly related divisions of bryophytes

Photo Graeme Ambrose: Wall
Screw-moss *Tortula muralis*



1. Mosses (Division Bryophyta),
2. Liverworts (Division Hepatophyta)
3. Hornworts (Division Anthocerotophyta) that were among the first plants to exist on Earth.

Mosses. There are two broad groups of mosses

1. Upright mosses have a single, usually unbranched, leafy stem bearing a stalked capsule at the tip.
2. Spreading or carpeting mosses are usually found in damp shady areas and bear stalked capsules on side branches.

Several species of local mosses were shown.

Liverworts grow in three forms:

- * Fleshy liverworts have a thick spongy thallus. Asexual repro-

duction occurs in small cups on the surface. Some species produce umbrella-like structures which house sexual reproductive organs.

- * Filmy liverworts have a thallus which is one cell thick, with a central midrib. It forks repeatedly. Need moist shelter sites.
- * Leafy Liverworts have stems with 2-3 rows of leaves. The leaves, often 2 or 4-lobed, lack veins.

Hornworts are recognised by dark green, slimy thallus and horn-like asexual organ. They prefer damp, bare, often clayey soil.

We thank Graeme for giving us an outline of this vast group of less well-known plants. He clearly explained the groups aided by his own diagrams and photos of many local species. He also made available electronic copies of his work on local species.

John Gregurke

Eucalypt Trees excursion Sunday 6 July

Meet at Rural Studies Centre 9.30am or start of Mt Warrenheip summit rd 9.40am. Round trip of 120km from Mt Warrenheip, through Creswick and Clunes forests.

Lunch stop at Ginger Adams Eucalyptus Distillery in Dunach NCR, 6 km NW of Clunes. Bring Costermans' tree books to help identify the 19 eucalypts we will see.

Mushrooming in Wombat Forest

Lead by Les Hanrahan

Even though the forecast predicted rain we had a gathering of about 20 interested in finding many species of fungi near Garden St Erth at Blackwood. As well as Ballarat Field Nats, there were members from the Castle-maine Club, Friends of Wombat Forest, a couple from Bendigo and few locals.



After many good fungi finds in the car-park area, we headed down the valley behind Garden St Erth on either side of the creek. After lunch in the picnic area, we headed down the road past the second car-park and made our way slowly along the tracks on either side of the road until 3.30 pm.

For the full list of fungi seen on the day refer to list provided pages 4,5 and 6

Photo: Cortinarius archeri

Every few steps we were able to detect fungi of varied shapes, sizes and colours. The colours included bright and pale shades of all colour of the rainbow: red, orange, yellow, green, blue, purple, and also black and white. Some were dotted, spotted, flecked and dappled.

Photo: *Trametes versicolor*



Although fungi were the focus of the day we did see a few flowers in bloom. There were a couple of tiny flowers on Bootlace Bush *Pimelea axiflora*, a few bushes of *Hakea decurrens*, a sad-looking sample of a Bluebell *Wahlenbergia stricta* and a yam flower. A few of us tasted the small red berry on the Prickly Currant Bush. After Friday night’s lecture we were very aware of many mosses lichens, liverworts and possibly hornworts especially down in the valley.

Photo: *Mycena* sp



I am personally grateful to Emily Noble for carrying a small vile of salt which was used to remove a leech from my neck. From the slowness of the group during the walks it was obvious that people were deeply involved in finding as many species of fungi as they could and so were grateful to Les for leading us to special sites and for identifying many of fungi.

Fran Hanrahan

Fungi List Blackwood Exc June 2014		
Genus	Common name	Description
Agaricus aff.silvaticus	Wood Agaric	
Amanita muscaria	Fly Agaric	Large
Amillaria luteobubalina	Honey fungus	Yellow
Calocera sinensis	Pretty horn	Coral fungi

Clitocybe clytocyboides	Funnel cap	
Collybia eucalyptorum		
Coprinellus disseminatus	Fairy bonnets	
Cortinarius austrocinnibarinus		
Cortinarius austroveneta	Green skinhead	Green cap
Cortinarius rotundisporus	Elegant blue webcap	
Cortinarius sinapicolor	Slimy yellow	
Cortinacr		
Crepidotus sp.	Brown shelf fungus	
Crepidotus sp.	White shelf fungus	
Galerina hypnorum	Moss Galerina	
Heterotextus peziziformis	Jelly bells	On logs
Hypholoma australe	Brick tuft	
Hypholoma brunneum	Brown tuft	
Hypholoma fasciculare	Sulphur tuft	
Laccaria sp.		
Lactarius deliciosus	Saffron milk-cap	Exotic
Lactarius eucalypti	A milk-cap	
Mycena albidofusca	White-crowned Mycena	
Mycena cystidiosa	Tall Mycena	
Mycena epipterygia	Yellow legs	Yellow-stemmed
Mycena interrupta	Pixies Parasols	Blue
Mycena nargan	Nargan's Bonnet	Black, white spots
Peziza sp.	Cup Fungi	
Postia pelliculosa	Furry punk	Furry top, on trees
Psathyrella echinata	Spiny psathyrella	Cap with spiny edge
Psilocybe subaeruginosa		Blue-staining
Rhodocollybia butyracea	Buttery Collybia	
Russula clelandii		Pink stem
Russula integra		Exotic Red top, white
Russula persanguinea		& stem
Sclerodema sp.	Earthball	split open
Stereum illudens	Purplish Stereum	
Trametes vesicolor	Rainbow fungi	On logs , dead wood
Tremella fuciformis	White jelly fungi	
Tubaria rufofulva	Burgundy wood	On logs, red

Amanita punctata

Photo: Mycena interrupt

Barya agaricola

Bolbitius vitellinus Egg-yolk

Chalciporus piperatus

Cortinarius archeri Emperor

Cortinarius austroalbidus Aust.White

Cortinarius globuliformis

Galerina hypnorum

Lactarius eucalypti Milk Cap

Leucopaxillus eucalypto-

Lycoperdon pyriforme

Lycoperdon perlatum Puffball

Macrolepiota clelandii Shaggy Parasol

Marasimius crinisqui Horse-hair Fungus

Mycena albidocapillaris

Photo:Psilocybe asubaeruginosa

Mycena cystidiosa Tall Mycena

Mycena subgalericulata gr.

Mycena viscidocruenta

Peziza vesiculosa

Polypore

Psathyrella asperospora

Psathyrella echinata

Psilocybe subaeruginosa Magic Mushroom

Ramaria gracilis Coral Fungus

Resupinatus applicatus

Russula clelandii

Russular iterika Green Russula

Stropharia semiglobata Dung Round Head

Tremella fuciformis Jelly Fungus

Tricholoma aff. terreum

Xerula australis Rooting Shank



Skip the long queue: Pre-book Melbourne Aquarium Tickets (See p 8)



www.melbourneaquarium.com.au

At Melbourne Aquarium take a journey through four worlds-

1. **Antarctica,**
2. **Weird & Wonderful,**
3. **River to Reef and**
4. **Sharks Alive**

See sub-Antarctic penguins as they swim

and play on the ice. Plus discover thousands of other aquatic animals including ghost-like jellies, massive rays, enchanting seahorses and fearsome sharks. With daily animal feeds and diver presentations adding to the adventure, the Melbourne Aquarium - aquatic wonderland.

Highlights-

- See Australia's only sub-Antarctic Penguins
- 2.2-million litre Oceanarium with fish bowl viewing
- Watch the daily animal feedings
- Fun for all ages

What You Can Expect at Melbourne Aquarium

The Melbourne Aquarium adventure begins with Antarctica, Marvel as the King and Gentoo penguins play and slide across the snow-covered ice .

Experience the marine animals. –sea horses, sea jellies, spiky lionfish and a whole host of tropical critters.

Journey from River to Reef and engage with freshwater animals such as turtles, frogs, snakes and eels before discovering sea jellies and a tropical collection in the Coral Atoll.



Sharks Alive will take you on an journey down into the deep blue of the awe-inspiring Southern Ocean in Melbourne Aquarium's 2.2-million liter Oceanarium!

The 100-square meter Fish Bowl viewing area allows you to feel as though you are underwater with sharks, massive stingrays, turtles and hundreds of fish swimming overhead.

Funday on Redan Wetlands (Orion St, Sebastopol)

Sun 20 July: 10am - 1pm Leigh Catchment Management Group is organising a community clean-up activity followed by free soup lunch.

Speakers: 12:20pm; Hedley Thomson, “Yarrowee “

12.40pm John Gregurke “Wattles of Ballarat “

<u>Aquarium costs</u>	Queue Up Price	Online You Pay From	Save Up To
Online Saver ADULT(15+ years)	\$38	From \$34.20	Up to \$3.80
Online Saver CHILD(4 - 15 years. Under 4s go free!)	\$22	From \$19.80	Up to \$2.20
Online Saver CONCESSION (Student or Pensioner)	\$30	From \$27	Up to \$3
Online Saver FAMILY OF 4 (2 Adults + 2 Children)	\$96	From \$86.40	Up to \$9.60
Online Saver SINGLE ADULT FAMILY (1 Adult + 2 Children)	\$66	From \$59.40	Up to \$6.60

Hints for submitting articles for *Ballarat Naturalist*.

Be brave and offer to write up a report remembering that the editor has the job to edit where appropriate.

For those interested these suggestions will help the editor, hopefully without making task of submitting articles too onerous for writers.

1. Submit you article to editor as a Microsoft Word document.
2. **Font:** Times New Roman **Size :**11
3. No space between paragraphs instead use **Style:** 3 above.
4. Two spaces between sentences.
5. Common names of plants and animals should be capitalised e.g. White-plumed Honeyeater, Broad-leaved Peppermint.
6. Scientific name in *italics* with name of genus capitalised e.g. *Eucalyptus dives*. No brackets.
7. Headings/Titles: centre, bold, size 12 and use initial capitals except for the words *the*, *and*, *a*, *an* and prepositions (*in*, *of*) making up the title that are not the first word.

There are many style guides on the internet. One useful is: *Free Australian Style Guide* at www.editoraustralia.com/styleguide.html

NB Much important information in the following -

Excerpts from Club Meeting Minutes, 6 June 2014

Opening and Apologies

Acting President, Fran Hanrahan welcomed 33 members and friends. Apologies: C&P Dalman, J Metcalf, E Swan, Z Martin, K Hammond

Correspondence in: FNCB member Chris Baulch has attained Life Membership of FNCV- congratulations. Friends of Box-Ironbark Forests: Order form “Mosses of Dry Forests in south-eastern Australia”.

Emails from Environment Victoria: appeal to call on the Federal Treasurer to cut subsidies to the fossil fuel industry; appeal to lobby the Government to maintain the Renewable Energy Target; appeals for donations for EVs campaigns to keep environmental concerns on the political agenda, and to stop alpine cattle grazing through a Supreme Court appeal; summary of detailed submission to Hazelwood Mine Fire Inquiry; introduction to new CEO of Environment Vic.

Emails from Environment East Gippsland: response to a petition “Pause and Review Planned Burns”; copy of an extensive article in the Bairnsdale Advertiser about EEGs meeting with Craig Lapsley and DEPI fire chiefs; link to an online petition to demand an independent inquiry into the handling of the 2014 East Gippsland fires.

From Victorian National Parks Assoc.: Appeal for donations to support legal case to oppose cattle grazing in Alpine National Park.

From Entomological Society of Victoria: Order form for the newly released “Moths of Victoria, Part 5”.

OUT:

Email to Hedley Thomson, E.O. of Ballarat Environment Network – agreement that FNCB should have a representative in any management group formed for Winter Swamp, and confirmation that John Gregurke has agreed to be the Club’s representative.

Email to Gayle Osborne confirming that a representative from FNCB would like to be involved in planned conference on Planned Burns with DEPI and other environmental groups. Email to Club members re. petition for independent inquiry into 2014 East Gippsland fires.

Emailed Nomination Form for City of Ballarat’s Exceptional Tree Register to Club members.

Letter to Ballarat City Council re. comments for consideration in The Moneghetti Track lighting trial at Lake Wendouree.

Letter to Brendan Roughhead, Regional DEPI Manager re. opposition to issuing of permit to cull native birds at Ballarat Golf Course.

Email to Club members re. invitation to Newstead Landcare Group event to hear guest speaker Alex Wild discuss “*How ants run ecosystems in Australia and around the World*” on July 6th.

Business Arising from Correspondence:

Nominations for the Ballarat City Council’s “Exceptional Trees Register”. Will we coordinate our efforts as a group or nominate individually? Individually at this stage, although all members are welcome to help John Gregurke record exceptional Red Gums at Lake Burrumbeet on Wed. 11th June. John told the group not to rely on other submissions about Significant Trees to Council in the past.

A sheet was circulated for orders for “*Moths of Victoria, Part 5*” and/ or *Mosses of Dry Forests in South-eastern Australia*”. The Club will organise a group order for each book to save on postage costs.

Reports Treasurer's Report: Opening balance \$5750.49 I n c o m e \$828 Expenses \$118 Closing balance: \$6460.40

John Gregurke gave us a quick rundown on the two workshops held so far on “*The Water Future of Ballarat and Region*”. His summary included the following observations: the original stated aim was to produce a whole-of-water-cycle plan for supplying Ballarat’s water; the focus of the workshops and consequent Draft Strategy are Urban-centric (particularly the town water supply, water for Lake Wendouree and sportsfields); whilst environmental values are mentioned, environmental flows for the Yarrowee River and Lake Burrumbeet amongst others seem likely to be given a low priority. John brought along a couple of copies of the Draft Strategy for Club members to read. The only other place to see more information and provide feedback (which John sees as important if environmental values are to take a high priority) is online at www.livingvictoria.vic.gov.au

General Business FNCB hosting SEANA Autumn 2015 Camp. Fran asked Club members to start thinking about potential locations for site visits/ field trips, and topics for main presentation.

Grevillea bedggoodiana Enfield *Grevillea* has been nominated for listing under the Flora and Fauna Guarantee Act. The Scientific Advisory Committee’s preliminary recommendation is that the species is eligible for listing. Do members have any information that can support the nomination?

Style Guide for submissions to “*Ballarat Naturalist*” will be in-

cluded in the next newsletter, but don't let it discourage you from submitting articles if you don't have the technical skills to comply. The Editor will make any necessary adjustments.

Show and Tell Reports In mid-May, Carol Hall and Peter Billing separately observed a Little Pied Cormorant catch a fish at Lake Wendouree, only to be dive-bombed by a Silver Gull hoping that it would drop it's catch. Mike Sorrell wondered if it was a coincidence that 8000 small Trout were recently liberated in Lake Wendouree. He had seen Pelicans enjoying them.

Carol also spotted two Water Rats in Fairyland at the Lake. John Mildren saw them at Lake Wendouree being harassed by Gulls. John Morrish saw a one feeding in 1-1.5 m deep water, with bubbles coming up when it entered the weed at the Lake bottom. He would like to know if they blow bubbles to "flush out" aquatic life in the weed or is it methane from the peat lower down? Can anyone help?

Margaret Thomas saw Crimson Rosellas in her Nerrina garden, along with Currawongs feasting on medlars, an Eastern Spinebill eating nectar from a Hummingbird Salvia and Wattlebirds on *Hakea* blossoms. There was also a Magpie on the feeding bowl for Rosella, flocks of tiny birds (perhaps Silvereyes or Thornbills) and Wood Ducks flying over her garden. She observed large flocks of Yellow-tailed Black Cockatoos and Galahs on nearby telegraph wires and at Nerrina Gardens she saw Masked Lapwings.

At Lake Burrumbeet, John Gregurke spotted three Blue-winged Parrots at Picnic Point, not a common sighting, and six different raptors in just one visit.

Paul Norquay hasn't had to peel his lemons for a while, with Ringtail Possums eating off the skin! He also recorded that evaporation for May exceeded rainfall by at least 30mm at Mt Egerton. Emily Noble spied her first Spider Orchid leaves coming up, along with abundant Sun Orchid leaves. The *Pterostylis smaragdina* Emerald-lip Greenhoods are budding on her Scarsdale property. Helen Burgess brought along some Greenhood Orchids to give away to interested members. Les Hanrahan brought along a Bird's Nest Fungi on a log that he found at his home. Mike Cuttle reported that he saw Red-browed Finches in his garden at Cardigan. Graeme Ambrose remarked that butterflies such as Cabbage Whites, Common Grass Blues, Yellow Admirals and Australian Painted Ladies were still flying through until late May, a couple of weeks later than usual.

CALENDAR 2014

July

- Fri 4 *Wet and Windy Life on Sub-Antarctic Island* - Carol Hall, Geographer & club member
- Sun 6 Exc: *Eucalypts north of Ballarat* - John Gregurke (p 3)
- Sun 20 Funday Redan Wetlands (p 7)

August

- Fri 1 *Wildflowers of WA* -Val Hocking, *Birds of Britain* -J Mildren & J Morrish, club members
- Sun 3 Exc: *Visit to Melbourne Aquarium* (p 10,11)

Committee

President Peter Dalman
Vice –President..... Fran Hanrahan
Secretary Emily Noble
Treasurer..... Les Hanrahan

Claire Dalman
John Gregurke
Wayne McGuire .

Val Hocking
John Mildren

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Meetings are held at the Primary Industries Training Centre, cnr and Gregory Sts, on the first Friday of the month at 7.30pm..

Excursions: Leave from the carpark at the Primary Industries Training Centre, cnr Gillies and Gregory Sts. at 9.30 am, unless otherwise advised.

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